

DEFINITIONS:

Alaska Traffic Manual (ATM) – The ATM is the standard for traffic control devices used on public roads in Alaska. It consists of the **Manual on Uniform Traffic Control Devices (MUTCD)** and the **Alaska Traffic Manual Supplement (ATMS)**. It references the **Alaska Sign Design Specifications (ASDS)**, which is the sign layout standard for Alaska Public Highways. All traffic signs are required to conform to the ATM.

<http://www.dot.state.ak.us/stwddes/dcstraffic/atmintro.shtml#>

ASDS is a supplement to the **ATM** and contains sign layout standards.

<http://www.dot.state.ak.us/stwddes/dcstraffic/asdsintro.shtml>

Standard Specification Drawings per Region:

Northern & Southcoast Regions

(Cordova, Fairbanks, Nome, and Kodiak)

- **Standard Drawing S-00.10** (Std. Dwg. S-00.10) Sign Framing and Post Spacing
- **Standard Drawing S-01.00** (Std. Dwg. S-01.00) Bracing for Signs Mounted on Single Posts

http://www.dot.state.ak.us/stwddes/dcsprecon/stdtdwgspages/signs_eng.shtml

Central Region – Specification and Attachment A

(Anchorage/Mat-Su and Kenai Districts)

- **Standard Drawing S-00.10** (Std. Dwg. S-00.10) Sign Framing and Post Spacing
- **H27** Sign Attachment Detail
- **H28** Light Sign Framing and Attachment Details

Regional Boundaries can be found at:

<http://dot.alaska.gov/stwdplng/cip/stip/assets/dotplanners.pdf>

The **Manual on Uniform Traffic Control Devices** is available for download at:

http://mutcd.fhwa.dot.gov/pdfs/2009/pdf_index.htm

The remaining materials are available at the State of Alaska, Department of Transportation and Public Facilities, Design and Construction Standards web site:

<http://www.dot.state.ak.us/stwddes/dcsspecs/index.shtml>

DESCRIPTION OF WORK:

This Contractor must supply the following Fixed Legend and Variable Legend Highway signs. All signs will be fabricated in conformance with the most recent version of the ATM, ASDS and Standard Drawings S-00.10, S-01.00, and Attachment A.

1. FIXED LEGEND SIGNS:

This includes sign types and object markers in the ATM and ASDS. Signs must have mounting holes and wind braces or framing if required.

- a) Orange background signs

2. VARIABLE LEGEND SIGNS:

This includes modifications of signs listed in the ATM and ASDS. The layout of variable legend signs must conform to the ATM and ASDS and be designed by the Contractor and approved by the State prior to fabrication. Signs must also have mounting holes and wind braces or framing if required.

- a) Single Sided Variable Signs
- b) Street Name Signs, Double Sided – Single Panel
- c) Street Name Signs, Single Sided – Two Panels
(order with Special Small Sign Bracing for back-to-back mount)
- d) Orange Background Signs.

3. SIGN LAYOUT:

All sign layouts including shape, colors, fonts, symbols, corner radii and borders must conform to the ATM and ASDS. Street name signs (D3-1 series) that would exceed 48 inches in length when using series C fonts will use series B fonts to reduce overall length.

4. SHOP DRAWINGS:

Submit an electronic PFD shop drawing for all Variable Legend signs for approval prior to fabrication. Each sign must show the following:

- Overall dimensions
- Dimensions of horizontal and vertical characters and spaces
- Legend and letter series
- Panel thickness and sheeting material type
- Whether the sign will be framed
- Proposed location of splices if applicable
- List the Maintenance Station for Delivery of the Sign Order.

Regional contacts for approvals are as follows:

- Central Region (Lots 6 & 7): Scott Thomas - 269-0639 / scott.thomas@alaska.gov
- Northern Region (Lots 2-5): Pamela Golden - 451-2283 / pamela.golden@alaska.gov
- Southcoast Region (Lot 1): David Epstein - 465-4483 / david.epstein@alaska.gov

A copy of the approved shop drawing must accompany the sign when it is delivered.

5. REFLECTIVE SHEETING:

Use Type IV **retroreflective** sheeting (for lettering, symbols, borders, and background) on sheet aluminum panels for all signs EXCEPT FOR:

- a) Orange Background Signs: Use either Type VIII or Type IX fluorescent orange **retroreflective** sheeting.
- b) Railroad Crossbucks and Vertical Crossbuck Supports: Use white Type VIII or Type IX **retroreflective** sheeting for background of sign.
- c) Non-illuminated Overhead Signs with White Legends on Green Backgrounds: Use Type IX **retroreflective** sheeting for legends and background, creating the legend in one of the following ways:
 - Cut border and legend from white Type IX **retroreflective** sheeting and adhere to a green Type IX background, or
 - Cut stencil of border and legend out of green transparent acrylic film and use transparent adhesive to overlay the film on a white Type IX reflective background.
- d) Fluorescent Yellow-Green School Area Signs: Use Type VIII or Type IX **retroreflective** sheeting for background.
- e) Fluorescent Yellow Pedestrian or Bicyclist Warning Signs: Use Type VIII or Type IX **retroreflective** sheeting for background.

6. REFLECTIVE SHEETING WARRANTY:

Supply manufacturer's warranty for reflective sheeting, including retention of fluorescent yellow-green (measured in accordance with ASTM E 2301) for ten years according to the following criteria:

- Minimum Fluorescent Luminance Factor Y_F : 20%
- Minimum Total Luminance Factor Y_T : 35%W

The warranty must stipulate that: If the sheeting fails to meet minimum fluorescent values within the first seven (7) years from the date of fabrication, the manufacturer will, at the manufacturer's expense, restore the sign surface to its original effectiveness.

If the **retroreflective** sheeting fails to meet the minimum fluorescent values within the 8th through the 10th year from date of fabrication, the manufacturer will, at the manufacturer's expense, provide enough new replacement sign sheeting to the Department to restore the sign surface to its original effectiveness.

Use a manufacturer-recommended clear coat on all screened signs.

Frame signs as required in the Specifications.

Retroreflective sheeting shall meet AASHTO M 268, for the type specified.

Signs shall be constructed of single sheets of **retroreflective** sheeting. Splices or overlaps in reflective sheeting are not acceptable and will be refused.

ACRYLIC PRISMATIC REFLECTORS

Shall meet AASHTO M 290 and the dimensions and colors shown in the ATM or MUTCD.

MOUNTING HOLES

Signs shall be drilled for mounting in conformance with the Specifications.

7. WIND BRACING: LOTS 1 THROUGH 5:

Signs must be constructed with bracing when required per Standard Drawing S-01.00 (Std. Dwg. S-01.00). The Contractor must also supply the steel brace, nuts, bolts and washers for attaching the brace to the sign only. The Contractor is not required to supply the hardware necessary to attach the sign to the post. The State may require bracing on signs smaller than thirty (30) inches as designated on the order.

Street signs (D3-1, D3-1A, D3-1D) 48 inches or longer will be constructed of two single sided panels mounted according to Std. Dwg. S-01.00 "Small Street Name Sign Bracing Detail". The Contractor must supply aluminum tubes and rivets as specified on Std. Dwg. S-01.00.

Signs must be constructed with framing when required by Std. Dwg. S-01.00. The Contractor shall supply and install frames and rivets as specified on Std. Dwg. S-01.00.

8. WIND BRACING: LOTS 6 THROUGH 7:

Signs must be constructed with wind braces when required per Attachment A. The Contractor must also supply all brackets, clips, bands, nuts, bolts, rivets and washers as needed for attaching the frame to the sign. The Contractor is not required to supply the hardware necessary to attach the sign to the post. The State requires framing on all D3-1 street name signs (D3-1, D3-1A, D3-1D).

Street name signs (D3-1, D3-1A, D3-1D) will be forty-two (42) inches or less in width. Street name signs must be constructed of two single sided panels mounted according to Attachment A. The Contractor must supply and install aluminum tubes and rivets as specified in Attachment A.

9. FRAMING:

All framing materials must be attached to signs per the Standard Drawing S-00.10 or Attachment A, depending on region.

10. LABEL:

Each sign (except D3-1 double faced signs) shall have a label attached to the back of the sign in the lower right corner. Make the label at least 15 square inches and show the year the sign was purchased from the manufacturer.

Show the last two digits of the year in clear and bold numbers. Make the label from Type I or brighter reflective sheeting. Use background and legend colors shown in the following Table.

Decal Colors		
YEAR	Background Color	Legend Color
XXX1	Yellow	Black
XXX2	Red	White
XXX3	Blue	White
XXX4	Green	White
XXX5	Brown	White
XXX6	Orange	Black
XXX7	Black	White
XXX8	White	Black
XXX9	Purple	White
XXX0	Strong Yellow-Green	Black

Central values and tolerance limits for each color, as referenced in the MUTCD, are available from the Federal Highway Administration, (HHS-30), 400 7th St. SW, Washington, D.C. 20590

11. WORKMANSHIP:

All materials and finished signs are subject to inspection.

Signs with defects that impair serviceability, appearance, quick legibility, create a difference in appearance between day and night, or detract from general appearance or color match will be rejected. The State is the sole arbiter of sign acceptability.

Finished signs must be clean and have no chatter marks, burrs, sharp edges, loose rivets, bubbles, delaminated reflective sheeting, or aluminum marks. Do not make repairs to the face sheet.

METHOD OF MEASUREMENT:

12. FIXED LEGEND SIGNS AND OBJECT MARKERS:

By the total area of legend-bearing sign panel accepted. No deductions in quantity for corner rounding will be made. Nominal dimensions for sign sizes indicated in the ATM or ASDS shall be used to calculate sign pay quantities.

13. VARIABLE LEGEND SIGNS:

Actual areas for signs will be measured accept:

- Octagons and round signs will be measured as rectangles.
- S1-1 signs will be measured as squares.

No deductions in quantity for corner rounding will be made.

Only one side of each double-faced sign panel will be measured for payment.

14. PAY (BID SCHEDULE) ITEMS:

- 1a Fixed Legend Signs and Object Markers
- 1b Fixed Legend Signs (Orange Background)

- 2a Single Sided Variable Signs
- 2b Street Name Signs, Double Sided – Single Panel
- 2c Street Name Signs, Single Sided – Two Panels
- 2d Orange Background Signs

All fabrication must conform to Std. Drawings S-00.11, S-01.00, and Attachment A. Unless otherwise specified at time of order, all orders must come with brackets / framing.